

5 **The Claims:**

1. A software engine for application loading a software application onto a user's machine, wherein a core service of the application is loaded onto the user's machine to enable the application to commence to operate on the user's machine, the engine subsequently loading non-core services of the application according
10 to a priority order determined by the engine.
2. A software engine as claimed in claim 1, wherein the engine is part of the core service and is loaded with the core service.
- 15 3. A software engine as claimed in claim 2, wherein the engine commences operation upon completion of loading of the core service.
- 20 4. A software engine as claimed in claim 1, wherein the priority order includes a top priority, top priority being given to any non-core service of the application required to be on the user's machine as a result of interaction with the application by the user.
- 25 5. A software engine as claimed in claim 1, wherein the non-core services are loaded in a manner controlled by the engine.
6. A software engine as claimed in claim 5, wherein the control takes into account user interaction with the application.
- 30 7. An engine as claimed in claim 5, wherein before loading the non-core services they are registered with the engine.
8. A software engine as claimed in claim 7, wherein the engine checks the registration list of non-core services before loading a requested non-core service.
- 35 9. A software engine as claimed in claim 1, wherein there is provided a cache into which at least one object for the application can be stored.

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10. A software engine as claimed in claim 9, wherein the engine includes a memory management module that keeps track of usage of cached objects; the memory management module being able to de-allocate one or more of the objects.

10 11. A software engine as claimed in claim 10, wherein the cache is operative only when the application is on the user's machine.

12. A software engine as claimed in claim 9, wherein the cache includes an object repository into which the at least one object is placed, and an object description.

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13. A software engine as claimed in claim 12, wherein the object description includes one or more selected from the group consisting of: object reference, object key, reference counter and time stamp.

20 14. A software engine as claimed in claim 10, wherein the de-allocation of one or more of the objects includes an arbitrary time offset.

25 15. A software engine as claimed in claim 14, wherein if the object description of an object in the object repository has a reference counter equal to zero for a time equal to at least the time offset, the corresponding object description is removed from the object repository.

16. A software engine as claimed in claim 1, wherein the loading is downloading over the Internet.

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17. A method of loading a software application onto a user's machine using a software engine, the method including loading onto the user's machine core services of the application to enable the user to interact with the application, and loading non-core services of the application according to a priority order determined by the engine.

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- 5 18. A method as claimed in claim 17, wherein the engine is part of the core service
and is loaded with the core service.
- 10 19. A method as claimed in claim 18, wherein the engine commences operation
upon completion of loading of the core service.
- 15 20. A method as claimed in claim 17, wherein before loading the non-core services
they are registered with the engine.
- 20 21. A method as claimed in claim 17, wherein with the priority order there is created
a top priority, top priority being given to any non-core services of the application
required to be on the user's machine as a result of interaction with the
application by the user.
- 25 22. A method as claimed 21, wherein upon interaction with the application by the
user, the application requests the engine to load at least one of the non-core
services, the engine checks the registration and gives the at least one non-core
service top priority for loading.
- 30 23. A method as claimed in claim 21, wherein the loading of the non-core services is
in a manner controlled by the engine.
- 35 24. A method as claimed in claim 23, wherein the control takes into account user
interaction with the application.
- 30 25. A method as claimed in claim 17, wherein objects of the application are storables
in a cache for reuse.
- 35 26. A method as claimed in claim 25, wherein cached objects are tracked using a
memory management module of the engine, which can de-allocate one or more
of the objects.

5 27. A method as claimed in claim 26, wherein the cache is operative only when the application is on the user's machine.

28. A method as claimed in claim 25, wherein the objects are placed into an object repository in the cache, together with an object description.

10 29. A method as claimed in claim 28, wherein the object description includes one or more selected from the group consisting of: object reference, object key, reference counter and time stamp.

15 30. A method as claimed in claim 26, wherein de-allocation includes an arbitrary time offset.

31. A method as claimed in claim 30, wherein if the object description of an object repository has a reference counter to equal to zero for a time equal to at least the time offset, the corresponding object description is removed from the object repository.

20 32. A method as claimed in claim 17, wherein the loading is downloading over the Internet.

25 33. A computer memory management system for use with a software application, the memory management system including a cache, and wherein objects of the application are storable in the cache for reuse.

30 34. A system as claimed in claim 33, wherein the cache is operative only when the application is on the user's machine.

35. A system as claimed in claim 33, wherein the objects are placed into an object repository in the cache, together with an object description.

- 5 36. A system as claimed in claim 35, wherein the object description includes one or
more selected from the group consisting of: object reference, object key,
reference counter and time stamp.
- 10 37. A system as claimed in claim 33², wherein cached objects are tracked using a
memory management module, which can de-allocate one or more of the objects.
- 15 38. A system as claimed in claim 37, wherein de-allocation includes an arbitrary
time offset.
- 15 39. A system as claimed in claim 38, wherein if the object description of an object
repository has a reference counter to equal to zero for a time equal to at least the
time offset, the corresponding object description is removed from the object
repository.

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MUNIZ, J. M., JR. AND DEPLOM, M. D. IN DEPT. OF POLYMER SCIENCES, U. S. C., LOS ANGELES, CALIFORNIA.